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CPM PROJECT

DECREASING RABIES TREATMENT EVENTS

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STATE DOCUMENTS

Project Statement and Goals

The Department of Health and Environmental Control's Environmental Health Branch is responsible for implementing the rules and procedures provided for in the Rabies Control Act of South Carolina. The purpose of this act is to protect the citizens of the state and their pets from the serious threat of contracting rabies.

Rabies is a viral disease which is always fatal. If contracted it attacks the nervous system of the host and progresses through the nerves, eventually reaching the brain. After the virus reaches the brain death is soon to follow. It is important to note that once rabies is contracted there is no cure, therefore The Department of Health and Environmental Control's (hereafter referred to as DHEC) role is one of intervention to prevent clients or their pet from contracting the disease.

The state of South Carolina is divided into thirteen health districts,(see appendix I) with each district having from 2-6 counties included within its boundaries. The Wateree district includes Sumter, Clarendon, Kershaw and Lee counties. The task of implementing the Rabies Control Act falls on each county individually and each must work with the resources they have available to them at the local level. This project will focus on data gathered locally from the Wateree district and state data compiled within DHEC's state office.

DHEC's main goal is one of customer service. In implementing the Rabies Control Act this would include but is not limited to protecting the customer's health by insuring that if a client is bitten by an animal any action needed to prevent

them from contracting rabies will be performed in a timely manner by DHEC personnel.

In the state of South Carolina in 1998 four hundred and twenty-two(422) persons underwent rabies post exposure treatment at an average cost of \$1,000 dollars each provided by the state, thereby costing the citizens of South Carolina approximately \$422,000 dollars.

The goal of this project will be to decrease the number of cases requiring post exposure treatment by 10 percent, thereby saving the state approximately \$42,000 dollars annually, and saving numerous clients the agony and pain of taking the post exposure treatment.. The success rate can be measured the first full calender year after implementing the solutions or recommendations.

The project will consist of gathering data from the Wateree district which contains several different types of county demographics and various municipalities, analyzing the data to determine the various probable causes that contribute to the DHEC physicians recommending the administration of the post exposure treatment, searching for possible solutions and recommendations that will effectively decrease the number of exposure cases requiring treatment, and then applying the recommendations and solutions to the district and then the state as a whole.

The goal and its success can be measured accurately by comparing the statistics of treatment cases in 1998 (the baseline year) to the number of treatment cases in a future year after the solutions are put in place and implemented. This

measurement can take place at the district level or the state level according to what implementation process has taken place. The acceptable success rate for any given district may be more or less than the stated overall goal. The stated goal is only applicable to the state as a whole.

Cause Analysis

To determine what should be done to decrease the number of people requiring Post Exposure Treatment (PET), data were collected and input was solicited from county supervisors. The following paragraphs explain the data collection process and identifies potential causes. This section also offers some solutions to meet the goal previously stated.

Data were collected from each county in the Wateree district. The data include total number of bite investigations performed by each county, the number of investigations that involved pets, the number of investigations that involved strays, the number of people requiring PET, the number of people requiring PET when the biting animal was a pet, the number of people requiring PET when the biting animal was a stray or wild etc. The data are also compiled as a cumulative total for the district. The following is a chart of this collected data:

	Clar	Sumter	Lee	Kers	District
No. of bite inv.	91	272	39	217	619
No. Of bite inv./pets	75	251	36	210	572
No of bite inv./strays	16	21	3	7	47
# people requiring PET	4	11	2	8	25
# people requiring PET/pet	0	0	0	1	1
# people requiring PET/stray	4	11	2	7	24

Using the above data a number of calculations were performed (using the

district's results) to determine the relationships (if any) of type of bite (pet or stray) to treatment required. The calculations were as follows:

- 1.) 96% of cases requiring treatment involved stray or wild animals
- 2.) 51.06% of investigations involving strays resulted in the victim requiring PET treatment
- 3.) Only 7.59% of investigations involved stray animals
- 4.) 4.04% of the total investigations resulted in the victim undergoing treatment

After the above calculations were made the county supervisors were polled and asked to give their own opinions as to why we as a district have so many animal bite cases requiring PET, and what can be done to lower this number.

Their responses were as follows:

- 1.) lack of public education- people are not educated enough concerning the dangers of coming in contact with or playing with a stray or wild animal
- 2.) victims not taking their own situation seriously- victims routinely are not very helpful in helping DHEC personnel locate the animal that has bitten them
- 3.) encroachment of civilization into remote or wooded areas- this encroachment has the potential of creating a situation whereas more people are likely to come in contact with stray or wild animals
- 4.) people destroying biting animal prematurely- people kill and dispose of biting animals and later report the incident to DHEC resulting in the specimen not being suitable to properly test it for the rabies virus

5.) adequate animal control personnel lacking in some areas- animal control personnel could effectively reduce the stray animal population in any given area

After examining all data collected, some definite causes for people taking the PET have been established:

- 1.) an overabundance of stray or wild animals
- 2.) lack of public education and awareness concerning rabies
- 3.) the public not willing to help locate biting animals
- 4.) lack of sufficient animal control personnel

In summary, several objectives that will enable DHEC to achieve its goal of decreasing PET cases by 10% have presented themselves:

1.) decrease the number of stray animal bites- This objective can be achieved by educating the public, through any means available, about the dangers of coming in contact with any stray animal (whether it is a dog, cat, or any type of wild animal). The objective may also be achieved by actually decreasing the number of stray animals in any given area by working with local officials in implementing an effective animal control program and helping them to identify problem areas.

2.) educate the public about rabies- This objective can be achieved by developing and implementing a comprehensive educational campaign that may include seminars in schools, creating appropriate literature and distributing it from existing DHEC offices, veterinarian offices etc., as well as at public gatherings (I.E. festivals, fairs etc.), and having newspapers print articles about rabies

periodically.

3.) educate victims on the importance of helping DHEC personnel locate the biting animals in a timely manner

4.) promote the need and benefits of establishing an adequate animal control program to city and county governments- This objective may be achieved by meeting with the proper local authorities and giving them as much information and statistics as needed to stress the importance of having some type of animal control program in place.

Implementation Plan

Using the time line included in appendix 2, a procedure for implementation has been outlined.

Communication between all personnel involved is crucial to the success of this project. Proper communication will be achieved by holding periodic meetings between various groups and setting up a communication network to insure an open line of communication exists at all times.

The work involved will have to be achieved during regular work hours with assurances from staff that existing work loads will not be compromised. This can only be achieved by having the full support of management which must be gained by presenting the clear objectives of the project along with the positive outcomes..

The plan can be integrated into a normal operating procedure for field personnel by allowing them flexibility in scheduling their normal workload. Upon completing the evaluation, the plan can be demonstrated to management showing the results, therefore justifying hiring additional personnel in order to accommodate the increased workload.

Several obstacles directly related to the success of this project are anticipated. The first obstacle is one of time constraints. All current employees called upon to assist in this project already have a workload that requires a full workweek, therefore, until the project's success can be measured they must be

willing to make scheduling adjustments in order to accomplish the tasks set forth in the plan. Employees supporting the implementation plan are essential to its success. The second obstacle anticipated is the problem of getting cooperation from local authorities. They can do their part in adding to the success of the project by establishing a sufficient animal control program in the various areas. The third obstacle anticipated is convincing upper management that the proposed method of reaching the goal has merit, and is worth the effort required to implement it on a trial basis.

In conclusion, the implementation plan designed to achieve the objectives stated in the cause analysis will include the following components:

1. periodic meetings with county supervisors to discuss goals, obstacles, and progress
2. meeting with upper management to discuss goals and to insure support of plan
3. formation of a team of environmentalist charged with designing an educational program that can implemented with existing personnel resources
4. county supervisors meeting with local authorities to set up a working animal control program to reduce the number of stray animals
5. implement the full educational program
6. begin evaluating the success of the overall plan and make adjustments as needed to improve success rates

Evaluation Method

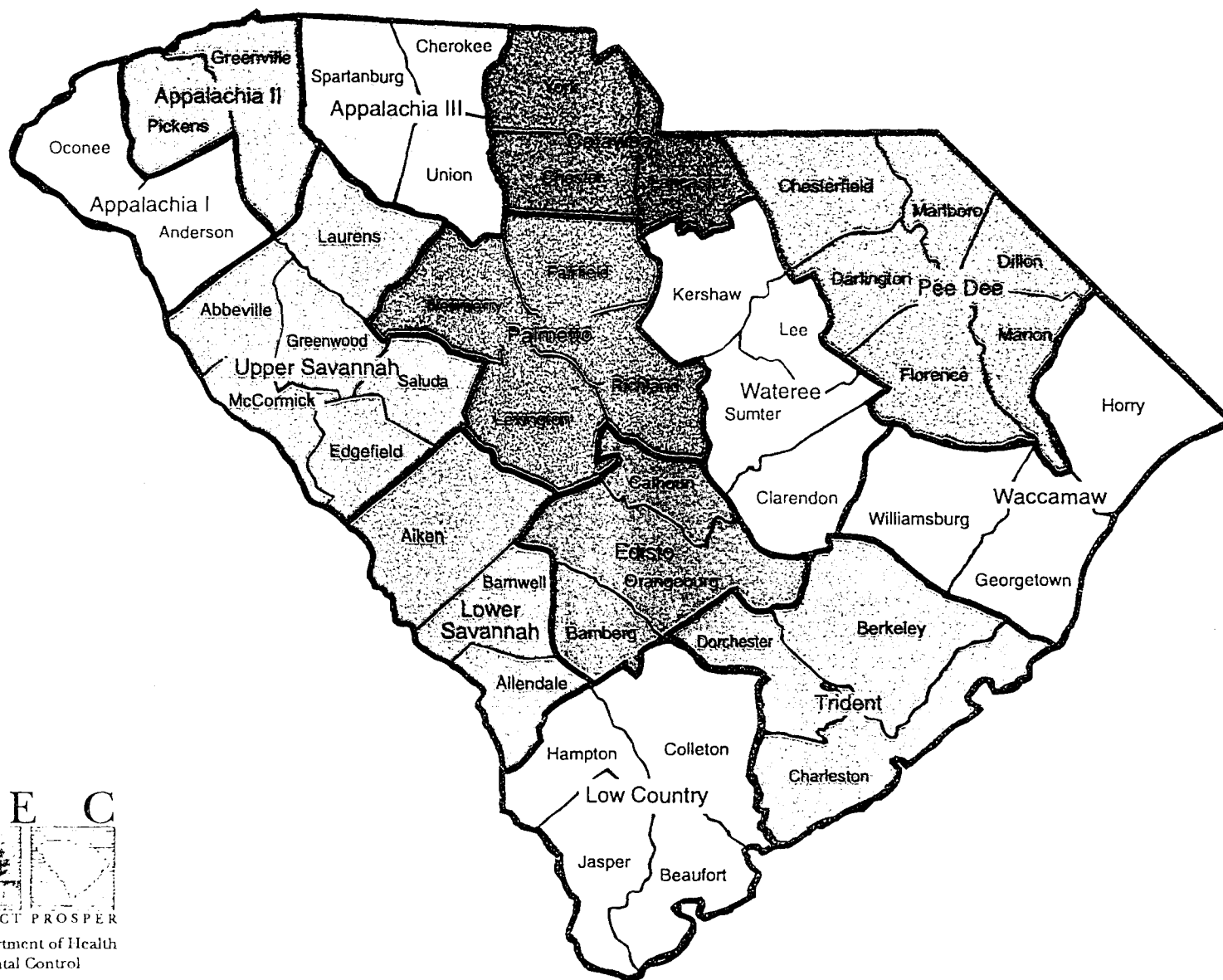
Starting in January of the year 2001 the same data used in the cause analysis will be collected every quarter by the county supervisors. The data will be compiled in order to evaluate success of the project by using the data from 1998 as a baseline for comparison purposes only.

Two weeks after the data is compiled the county supervisors will meet. A determination will be made as to effectiveness of the current processes and recommended changes will be discussed and implemented.

After the plan has been evaluated for one year a meeting between myself, county supervisors and upper management will be held. All aspects of the plan will be discussed in detail at this meeting, including apparent successes or failures of the plan, and a decision will be made whether or not to continue implementation of the plan.

South Carolina Department of Health & Environmental Control Health District Map

Appendix 1



South Carolina Department of Health
and Environmental Control

SCDHEC 2A-3582 12/96

Appendix 2

TIME LINE

Meet with county supervisors
to discuss project goals
4-1-2000

Form team to create educational plan
4-15-2000

Second meeting with supervisors to
discuss individual county needs
5-1-2000

Meet with educational plan team to
evaluate progress
5-15-2000

County supervisors meet with local
officials to discuss local problems
and give recommendations
6-5-2000

Meet with educational plan team
to review final plan
7-1-2000

Meet with upper management to
clear additional duties needed to
implement educational team's plan
7-8-2000

Meet with all personnel involved and
distribute educational plan
8-1-2000

Implement educational team's plan
9-15-2000

Appendix 2 (continued)

Supervisors meet with local officials
to follow up on recommendations
10-1-2000

Meet with supervisors to discuss
progress with local officials
10-20-2000

Begin evaluation process
1-1-2001